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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,353	11/26/2003	Takatoshi Tsuchiya	117059	6158

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EXAMINER

MARTIN, LAURA E

ART UNIT PAPER NUMBER

2853

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/721,353	Applicant(s) TSUCHIYA ET AL.	
	Examiner Laura E. Martin	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merz et al. (US 6254227) in view of Santhanam et al. (US 20020196317).

Merz et al. discloses:

As per claim 1: a fluid container system for containing fluid comprising: a first container that contains the fluid (figure 2, element 24), the first container being evacuated to a negative gauge pressure when being filled with the fluid (column 1, lines 28-38); a second container having a capillary medium that contains the fluid (figure 2, element 22); a passage between the first and second containers communicating the fluid at a level wherein the passage is wetted with the fluid (figure 2, element 30); a ventilation port to communicate air between an interior region in the fluid ejection system and ambient (figure 2, element 60); at least one spill over region to communicate the fluid with the second container (column 4, lines 25-38) and the at least one spill over region has sufficient volume to contain a quantity of the fluid that migrates out of the second container; a channel that freely communicates the ambient air from the ventilation port with the second container (figure 2, element 61).

As per claim 5: the first and second containers are separated by a partition above the passage (figure 2, 20).

As per claim 6: the first container comprises a plurality of first chambers (figure 2).

As per claim 7: the second container comprises a plurality of first chambers (figure 2).

As per claim 8: the first container further comprises a plurality of first chambers, and the second container further comprises a plurality of second chambers (figure 2).

As per claim 9: the first and second containers comprise a concatenated communicating series of first and second containers connected together to communicate the fluid (figure 2, elements 22 and 24).

As per claim 10: a fluid container system for containing fluid comprising: a first container that contains the fluid (figure 2, element 24), the first container being evacuated to a negative gauge pressure when being filled with the fluid (column 1, lines 28-38); a second container having a capillary medium that contains the fluid (figure 2, element 22); a passage between the first and second containers communicating the fluid at a level wherein the passage is wetted with the fluid (figure 2, element 30); a partition above the passage separating the first and second containers (figure 2, element 20); a ventilation port to communicate air between an interior region in the fluid ejection system and ambient (figure 2, element 60); at least one spill over region to communicate the fluid with the second container (column 4, lines 25-38); a lid for sealing the containers from the ambient (figure 3, element 80); the at least one spill over

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region has sufficient volume to contain a quantity of the fluid that migrates out of the second container (column 4, lines 25-38); a channel that freely communicates the ambient air from the ventilation port with the second container (figure 2, element 61).

As per claim 11: a method for ventilating a fluid container that contains fluid, said method comprising: containing the fluid in a first container under a negative gauge pressure (column 1, lines 28-38); containing the fluid in a second container with a capillary medium (figure 2, element 22); connecting the first and second containers to enable the fluid to flow therebetween through a wetted passage (figure 2, element 30); connecting the second container to a ventilation port exposed to ambient (figure 2, element 60); connecting the second container to at least one spill over region (column 4, lines 25-38), wherein the spill over region has sufficient capacity to contain a quantity of the fluid to maintain the free flow of ambient air; a channel that freely communicates the ambient air from the ventilation port with the second container (figure 2, element 61).

As per claim 12: sealing the container from the ambient (column 3, lines 57-65).

As per claim 14: communicating the fluid from a first spill over region of the at least one spill over region to a second spill over region when a volume of the fluid exceeds a volumetric capacity of the first spill over region (column 3, line 65-column 4, line 38).

Merz et al. does not disclose:

As per claim 1: a plurality of channels to freely communicate at least the ambient air from the ventilation port between the interior region and a container, wherein each of the plurality of channels provides a different path that channels ambient air from the ventilation port to the container so that the at least one of the plurality of channels remains in an unwetted condition to maintain air communication between the second container and the ambient.

As per claim 2: a lid for sealing the first and second containers from the ambient wherein the channels are disposed on the lid.

As per claim 3: at least one, but not all, of the channels communicates the fluid.

As per claim 4: the quantity of fluid corresponds to a volume needed to prevent the fluid from wetting all of the channels.

As per claim 10: a plurality of channels to freely communicate ambient air from the ventilation port between the interior region and the second container, each of the plurality of channels providing a different path that channels ambient air from the ventilation port to the second container, wherein the channels are disposed on the lid.

As per claim 11: a plurality of channels to allow at least ambient air to freely flow therebetween, each of the plurality of channels providing a different path that freely channels ambient air from the ventilation port to the second container.

As per claim 13: connecting the second container to the ventilation port further includes disposing the plurality of channels on a lid that seals the first container.

As per claims 15-17: a first of the plurality of channels is located near one side wall of the fluid container system and a second plurality of independent channels is located near an opposite wall of the fluid container system.

Santhanam discloses:

As per claim 1: a plurality of channels to freely communicate at least the ambient air from the ventilation port between the interior region (figure 9, elements 244A-E) and a container, wherein each of the plurality of channels provides a different path that channels ambient air from the ventilation port to the container so that the at least one of the plurality of channels remains in an unwetted condition to maintain air communication between the second container and the ambient [0056-0057].

As per claim 2: a lid for sealing the first and second containers from the ambient wherein the channels are disposed on the lid (figure 9; [0056-0057]).

As per claim 3: at least one, but not all, of the channels communicates the fluid [0056-0057]

As per claim 4: the quantity of fluid corresponds to a volume needed to prevent the fluid from wetting all of the channels [0056-0057].

As per claim 10: a plurality of channels to freely communicate ambient air from the ventilation port between the interior region and the container (figure 9, elements 244A-E), each of the plurality of channels providing a different path that channels ambient air from the ventilation port to the second container, wherein the channels are disposed on the lid (figure 9).

As per claim 11: a plurality of channels to allow at least ambient air to freely flow therebetween, each of the plurality of channels providing a different path that freely channels ambient air from the ventilation port to the container (figure 9, elements 244A-E).

As per claim 13: connecting the second container to the ventilation port further includes disposing the plurality of channels on a lid that seals the first container (figure 8, element 240).

As per claims 15-17: a first of the plurality of channels is located near one side wall of the fluid container system and a second plurality of independent channels is located near an opposite wall of the fluid container system (figure 9, elements 244d and 244e).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fluid container system and method taught by Merz et al. with the disclosure of Santhanam in order to improve printing and ink quality.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin


STEPHEN MEIER
SUPERVISORY PATENT EXAMINER